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IN AMERICA

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Fraud in Food.

The Chicago Tribune, of April 23d, remarks under the above caption :

There is scarcely an article of food in the market sold for man's consumption that is not adulterated in some manner. From flour to candy, and from brandy to mixed pickles, the work of the adulterator is seen. Nothing is too large or too small for him to tamper with, and the only guard against this growing evil is the possession of a thorough scientific knowledge and a microscope. Scientists say that food adulteration is the worst evil with which sanitary science has to battle. Many of the states have tried to suppress it, and much has been written against it, but to no avail. Sloe leaves and sand still continue to reduce the purity of tea and sugar, and the boarder still revels in chicory, plumbago, Prussian blue, oleomargarine, starch, alum, burnt sugar, glucose, rye, beans, ground almond shells, salts of tin, gypsum, and enough of the insoluble to make a Pennsylvania goat die of indigestion in a week. Scientists divide adulterations into three kinds, fraudulent, deleterious and accidental. The latter, of course, scarcely enters into the question. It is said by the virtuous grocers that adulterated articles never reach even the medium class of customers, but are confined to the trade which demands, through necessity, the cheapest grade of goods. They say that a sufficient number of articles have been so reduced in price as to make adulteration unnecessary and impossible. This is denied, however, by a great portion of the people and by chemists, who say they are constantly analyzing specimens of adulterated goods bought from reputable stores. Each grocer has his own excuse, and they all generally lay the blame upon the wholesaler or producer. The farmers and millers are "out" a convenient distance, and, therefore, come in for their share of the responsibility. These parties in

turn claim that their produce is adulterated by the middlemen, which class disclaim the accusation and give it to the dealers themselves.

Thus it is impossible to fix the responsibility upon any one class, and the people have their choice, if they wish to do anything in the way of anathema, when the almond-shell in the coffee swells the swearful yearn in the human breast. Legislation in this matter is next to impossible, because it is seldom that the complaining parties can trace their injury, if any, to the suspected article, and the case, therefore, goes by default.

Among the adulterations which are most common and most injurious is the practice of putting copper in pickles, lead in pepper, and poisonous colors in candy, the weakening of drugs, and, last but not least, the dilution of milk with water, thus weakening the food of children. The fraudulent adulterations are the most common, because legislation is powerless in their case. This last includes the mixing of low grades with the high grades of an article, such as flour, sugar, tea, coffee, oils and liquors, putting flour in mustard (after coloring it with tumeric), corn syrup and glucose into cane syrup, oleomargarine into butter, etc.

The accidental adulterations might possibly include sand in sugar and milk, dust in tea, and lead from mill stones in flour. Through ignorance, a "green" miller can spoil the best flour by running his mill stones too far apart or too close, or by the selection of damp grain. Tea brought by railroad from San Francisco, accumulates more or less dust on the journey, so the grocers say, but the railway men deny the fact.

The following list of articles is given, with the deleterious substances used to adulterate them :

Bread, alum, sulphate of copper; butter, copper; canned vegetables and meats, salts of copper, lead; cheese, salts of mercury in the rind; candy, poisonous colors, grape sugar; flour, alum; fruit jellies, poisonous colors; lard, lime; milk, water; pickles, salts of copper, alum; sugar, salts of tin and lead, gypsum; spices, flour, starch; cloves, arrow root; tea, foreign leaves, plumbago, gum, indigo, Prussian blue, soapstone, gypsum;

vinegar, sulphuric and hydro-chloric acids; wine, poisonous colors, brandy.

The adulteration of butter has become so flagrant that special legislation has been obtained in this State, and manufacturers of the spurious article are obliged to label each package with the proper name, together with the proportion of the ingredients. In this way the public has been warned and educated to something like discrimination, but there are other articles, the adulteration of which is just as flagrant to decency and as injurious to health.

Of late, cheese has been put upon the market and sold in large quantities which consisted mainly of lard and potatoes, artificially colored with annatto. Canned meats and vegetables are sold every day which are tainted with lead, copper, or tin from the cans. The articles themselves are almost invariably sweetened with syrup.... Sugar, too, suffers greatly at the hands of the adulterator. Not content with mixing the brands, he uses glucose in every grade, even in the pulverized and granulated brands. Rice flour and molasses are also used with an unsparing hand, and importers have been known to have the color changed to that of a lower grade, to escape the high tariff, and then to bleach it to its original shade after it had arrived at its destination. This is but a very imperfect list, but it will serve to keep the public informed as to the terrible extent to which these frauds are carried on, and to prepare it for future articles on the same subject.

The Chicago *Herald*, of April 29th, propounds the significant query, "Are Sweets Poisoned?" and follows it with the following letter from J. M. Chapman, Chicago:

A farmer bought one barrel of prime open kettle New Orleans molasses, but after a short use returned it, with word that while it might perhaps do at the South and in such a wicked city as Chicago, yet for a regular diet sweetened physic was a total failure among farmers. A letter was sent to the New Orleans shipper, asking him to look up the planter who made it and discover the cause of the trouble, suggesting that while the business of poisoning molasses for 5 cents a gallon might not be stopped, it could at least be located, and now rested upon him and the planters. To this he replied it was "straight plantation molasses," and certainly was not tampered with there.

In another case, a barrel of table syrup shipped to Iowa from Chicago produced burning sensations in the stomach after eating, and caused the death of one man who used it freely. Nothing was done about it.

One more consumer asks the question: Are not syrups poisoned?

As the *Tribune* frankly admits above, State legislation has proven incompetent to suppress the traffic in adulterated foods, but it has in some instances succeeded in embarrassing

it. With the above showing of adulterants, it is certainly within the province of Congress to stop the greater portion of the traffic, as a needed sanitary reform, and with our faith in the final triumph of right, we firmly believe the day is not far distant when all articles will be sold for what they are, and the component adulterants be specified.

The British Bee-Keepers' Association will hold their eighth great exhibition of bees and their produce, hives, and bee furniture, and fair for the sale of English honey, at the Royal Horticultural Society's Gardens, South Kensington, in connection with the Society's flower show, on Thursday, Friday, Saturday, Monday, and Tuesday, August 3, 4, 5, 7, and 8, 1882. Entrance Fees: Members of the Association, 2s. each entry; non-members, 4s. each entry. The prizes consist of silver and bronze medals, certificates, and over \$200 in money. Any one wishing to obtain an "entry form" and schedule of prizes can obtain it at this office.

By a notice in our advertising columns it will be seen that a German bee paper is to be published in Louisville, Ky., at 75 cents a year. Those who desire to have an American bee paper in German will no doubt be pleased at the prospect. We hope it may be a success.

The first quarterly report of the Kansas State Board of Agriculture for 1882 is received, and is a report of the condition of agriculture in the State up to March 31. In addition to the regular crop and stock reports, the book contains special reports upon the subjects of forest-tree growing in Kansas, the raising and management of sheep in different portions of the State, a paper on the cultivation of tame grasses, and the usual meteorological summary for the quarter. Any one desiring a copy can obtain it by enclosing a 3c stamp for postage to William Sims, Topeka, Kan.

Of catalogues we are in receipt of one each from G. J. Pammel, La Crosse, Wis., and L. E. Douglass, Whitmore Lake, Mich.

Binders cannot be sent to Canada by mail—the International law will not permit anything but samples of merchandise weighing less than 8 oz.

Removal of Our Office.

It will be observed that our number is now changed to 925 West Madison street, Chicago, Ill., just one block east of our former location. As our mail is so very large, the change will make no confusion, for the postal carriers are quite familiar with it, that whether addressed to one number or the other, letters will reach us just as promptly.

In 1873, nine years ago, when we purchased the BEE JOURNAL, a small room on the third floor was all that was required. In our new location, all on the first floor, the BEE JOURNAL and our Son's supply establishment (which is also moved to obtain increased facilities) occupies 23 times as many square feet of floor surface as in 1873.

The Postoffice Department has created a new branch postoffice within a few doors of our new location which will also be very convenient both for our patrons and ourselves.

We have a telephone connecting us with every part of the city, and should any of our subscribers be in the city, they can step into almost any store and talk with us, even if they cannot come and see us.

Novice has issued what he calls the "Boys' and Girls' Bee Journal," which he expects to issue occasionally free. It is not the most friendly thing to do, to copy our name, BEE JOURNAL, without so much as saying "by your leave."

Mr. J. S. Tadlock has located in Luling, Texas, and we notice that he is writing short articles on bee-keeping for the local papers there.

We have received a copy of the "Verdict March," composed by Eugene L. Blake. It is written in an easy style, so that it can be played on either piano or organ. The title page is very handsome, containing portraits of Hon. Geo. B. Corkhill, Hon. J. K. Porter, and Judge W. S. Cox; also a picture of the twelve jurymen who convicted the assassin of our late President. Published at 40 cents, by F. W. Helmick, Cincinnati, O.

Always forward us money either by postal order, registered letter, or by draft on Chicago or New York. Drafts on other cities, or local checks, are not taken by the banks in this city except at a discount of 25 cents, to pay expense of collecting them.



MISCELLANEOUS.

See that the Bees have Honey.—The *Prairie Farmer* advises all to now look well to the bees, and adds :

The first week in April was delightful—we ate it, drank it, and rolled in it. How the bees improved it—the young sporting in the glad sunshine, and the workers with heavily laden paniers, sailing into port. On Sunday the 9th inst., we divided our time between the peach bloom and the bees. The bloom was almost continuous on the branches of the peach trees, and the humming of the bees, as they passed from flower to flower, reminding us of the time when basswood is rich in nectar. We sat on a rustic seat, and watched the bees rushing in and out of the hives, intent on making the most of the bloom and fine weather. It is well they improved it, for how soon the petals of the peach bloom were limp and wilted, from freezing.

The mild winter and spring has been very favorable for brood rearing, and naturalists tell us, that an insect during its larvæ state consumes more food than during the rest of its life, consequently large quantities of honey have been consumed. No honey has been gathered since the freeze, and if this cool weather lasts much longer, it will result in the destruction of many fine colonies, unless they are fed. We have known colonies to starve in May, during a dearth of honey. Every colony should be carefully watched and fed, and none left to perish, as there are not enough bees in the country now to gather the nectar and fertilize the bloom.

Rules for Economic Apiaries Competition.—The London (Eng.) *Journal of Horticulture* gives the following as the rules adopted by the British Bee-Keepers' Association, for the government of competitors at the bee and honey shows. It will interest some of our readers in this country as well as Europe :

1. The object of this competition is to show the relative merits of different systems of bee-keeping, and to prove that bee-keeping if conducted on economical principles is highly remunerative to the bee-keeper.

2. Competitors shall be members of county associations affiliated with the British Bee-Keepers' Association residing within the recognized boundaries of their respective counties, or members of the British Bee-Keepers' Association residing in the county of Middlesex. Each competitor shall be limited to one entry, and shall pay an entry fee of 5s.

3. Prizes of £6, £5, £4, £3, £2, and £1 shall be awarded in the order of merit to the competitors who shall derive the greatest profit from an experimental apiary on not more than 2 hives at the outset, which may be increased to any extent by natural or artificial swarming. The total capital to be employed in commencing and maintaining the apiary must not exceed £2, and the competition to extend from May 20th, 1882, to August 30th, 1883.

4. The apiary shall be established in the garden of some cottager to be selected by the competitor and approved by the Secretary of the County Association, or in the case of the county of Middlesex by the Secretary of the British Bee-Keepers' Association.

5. The competitor shall keep a diary (a duplicate of which shall be kept at the cottage), in which all transactions connected with the apiary shall be recorded, and each item of expenditure and receipt entered; such diary to become the property of the British Bee-Keepers' Association at the close of the competition.

6. Each hive shall be weighed, and the weight minus the roof and covering shall be recorded in the diary. The hives shall be stocked with bees without combs; the bees to be valued at 4s. per lb. Comb foundation may be used at any period of the competition at 2s. 6d. per lb. for thick, and 3s. per lb. for thin. No bees, brood, or natural comb to be imported into the apiary after commencing. Queens may be introduced into the hives at any period of the competition, and shall be valued as follows: In the month of May, 8s. each; in June, 6s. each; in July, 4s. each; and any other month, 3s. each. All expenses incurred after the commencement of the competition must be defrayed from the original capital of £2. Vouchers must be produced for all purchases made throughout the competition, including hives, bees, and any appliances used at the commencement.

7. Each competitor may make his own hives and supers, but vouchers for the cost of the materials must be produced, and the workmanship valued by the Secretary of the County Association or an expert appointed by him.

8. Every amount expended in the apiary for food or any other incidental matter of whatever nature shall be charged against the apiary, and everything legitimately sold shall be set down in its favor. Vouchers must be produced for all bees and honey sold during the competition, according to the printed forms supplied to each competitor for this purpose.

9. The Secretary of the County Association may visit the competing apiary at any reasonable time, or may appoint an expert to do so. The record of such visits, together with any remarks which it may be advisable to make, to be entered in the diary, which shall always be accessible for the purpose.

10. The competitor shall certify that during its continuance he has fulfilled all the conditions imposed by these rules, and that all his entries in the diary are true. The Secretary, or his expert, shall certify as to the quantity and value of the honey produced by each competitor.

11. Any attempt at fraud will be punished by disqualification.

12. All entries must be made on the proper printed forms and accompanied with the entry fees on or before May 1st, 1882. Application for entry forms to be made to the Assistant Secretary, Mr. J. Huckle, King's Langley, Watford, Herts.

Successful.—The *Union*, of Oneida, N. Y., gives the following :

About the most successful apiarist we know of, in this section, is Ed. B. Beebe, who has been experimenting with the "little busy bodies" for several years. Out of the 94 colonies which he had last fall, he has succeeded in wintering 90, all of which seem to be in a thrifty condition. His bees consist of the Italian, Syrian and Cyprian varieties, which are conceded to be superior to our native breed. In addition to producing honey, Mr. Beebe turns his attention to the breeding of queen bees and manufacturing honey comb foundation, for which there is a wide-spread demand among apiarists. Mr. B. expects with proper management this season to reap a harvest of 10,000 lbs. of honey, and have at least 200 thrifty colonies on hand to winter.

A Bee Lawsuit in Germany.—Mr. Alfred Neighbour, of London, England, translates the following from the *Bienen-Zeitung* of Jan., 1882, on the above subject. The translator says that the damages awarded shows that there must have been 900 colonies on one farm :

The Royal High Court of Justice here has recorded a judgment which is of great importance to bee-keepers. For more than 15 years many bee-keepers of Rhineland and Westphalia had been in the habit of removing their bees to the fields of a farmer whose estate was adjoining a moor belonging to the brothers Von Raesfeld, which was visited by the bees in their search for honey. The brothers Von Raesfeld objected to this, and summoned the bee-keepers for trespass, but the case was dismissed. Thereupon they ordered some boxes to be exposed on the heath. The inside of these was covered with honey, and when a considerable number of bees had collected there the lids of the boxes were closed and the bees killed with brimstone by men specially engaged for the work. This conduct was the cause of an action by the bee-keepers against the Raesfelds, who were condemned by the Court to pay damages at the rate of 5.80 per hive, amounting to 5,000 m.



For the American Bee Journal.

My Reply to Mr. Heddon.

WM. F. CLARKE.

Absence and a consequent accumulation of work when at home, have rendered it impossible for me to do more than bestow a hasty glance on the BEE JOURNAL for more than a month past. Only to-day, while engaged in the pleasant task of "reading up" the back numbers, I have become aware that Mr. Heddon had been after me with "a sharp stick" in the issue of March 8th. Now I have a sincere respect for Mr. H., and, though I do not rate him quite so high as Prof. Cook in scientific attainments, I have no doubt he knows more about bees and bee-keeping than I do. Still, I do not accept him or anybody else, as infallible. Hence I should be sorry to have Mr. H. imagine that I am either offended or convinced, when I am not, and as he might deduce one or other of these incorrect conclusions from my silence, I will say something by way of reply to him.

First of all, I must flatly contradict his initial statement, "I have just read Mr. Clarke's attack on Prof. Cook." Mr. H. never read anything of the kind, because I never wrote anything of the kind. What he calls my "attack on Prof. Cook," the Prof. himself correctly designates "honest and kind criticism," in the BEE JOURNAL of Feb. 8, page 84. That was what was intended, at any rate. "Attack" implies hostility in feeling and intention. Men do sometimes make their theories so vital a part of themselves, that they regard criticism as personal attack. This is the very essence of bigotry.

As I cherish only the most kindly and respectful regard for both Prof. Cook and Mr. H., I must request and insist that "honest and kind criticism" shall not be labelled "attack." If I ever so far forget myself as to write anything for the BEE JOURNAL that deserves to be so called, I hope the editor will consign it to the oblivion of the waste-paper basket,—its proper place. What ails Mr. H. that he should resent so warmly and characterize so unjustly, what Prof. Cook, the party intimately concerned, had already accepted in the spirit in which it was penned? I have said thus much on this matter because it is vital to the BEE JOURNAL which will be deprived of one of its most valuable and useful features, if we cannot have free discussion in its columns within the bounds of courtesy. If when these bounds are sacredly respected, we are liable to be accused of making "attacks," we shall soon be afraid to differ from anybody, and then the BEE JOURNAL will be so tame and dull, that it will not be half so interesting as it is now.

Mr. H. says he has read my article on Prof. C. "with much interest and instruction." He adds, "I have re-read it, and re-re-read it, and to save my life, I can't see any argument in it." I suppose that is intended to be sharp and witty, but I am just as unable to see where the sharpness and wit come in, as Mr. H. is unable to see my argument. They may all be "thar" however, though neither he nor I can see them. Mr. H. says he read my lucubration with "much instruction," but it seems to me he got precious little, not near so much as he might have done, if he had been a more attentive reader. "First, he 'trembles' a little more before Cook than Heddon," not a very important item of information certainly, seeing that the trembling was only a harmless "goak," any how. "Second, that as long as he cries out 'more proofs' he doesn't know he is beaten." For "beaten" read "convinced," and there will be a small modicum of information, if not instruction, given. "Third, he recognizes no answer to his wordy sarcasms, in what I have said in my reply to his attack on the 'pollen theory.'" Here again for "attack" read "criticism." I assure Mr. H. that I do recognize his article as an "answer," but then it is not satisfactory and convincing. Some people can see in objects what others cannot see. It is said that "love is blind," but some humorist has remarked, that sweethearts see in one another what nobody else can.

Mr. H. says he "saw evidence," when examining "several hundred dysentery-killed colonies," that "pollen-eating caused the disease." I have no doubt he thought he saw it. I respect the sincerity of his conviction, but yet do not share it. I may be too exacting in the matter of evidence. It takes less to convince some than it does others. I am a natural-born doubter. It takes very clear evidence to convince me on any subject. This may be more than infirmity in me,—possibly a fault, but strong-minded believers like Mr. H. should be patient with those who are "weak in the faith" like me. Mr. H. details his experiment with "flour-brick," and asks, "I wonder if the above experiment will convince Mr. Clarke any?" To which I reply, not much, for the simple reason, that "flour-brick" is not pollen, exactly.

After all, I am only in the same unbelieving box with Mr. H. He says in his reply to Messrs. Demaree and Casson, April 5, BEE JOURNAL, page 213: "I see no proof sustaining Mr. D.'s premises." Mr. D. sees the proof plain as daylight, Mr. H. does not. In this connection, Mr. H. asks, "Does Mr. Demaree not hold some stories as divinely true, whose witnesses lost the cheerful habit of living in this world some hundreds of years ago?" The only "stories" that anybody holds to be "divinely true" are those of the Bible, and while I question the wisdom or propriety of such an allusion in the columns of the BEE JOURNAL, yet taking my cue from Mr. H., I will borrow an illustration from one of them. There was a disci-

ple who has been nicknamed all through the ages of the Christian era, "Unbelieving Thomas." He saw no proof of the resurrection, but stated what evidence would convince him. Possibly he asked too much. But the very evidence he demanded was given, and then he owned himself, not "beaten," but convinced. Pile on the evidence, Mr. H. As Daniel Webster said, "it is the facts we want." When they are furnished, I shall bow to them. I think I have understood that Mr. H. does not accept the stories he refers to as "divinely true." If so, I am sorry, but not vexed at him, nor angry with him. They command my faith, and I wish they did his. But I feel none the less kindly towards him, because he considers the evidence insufficient.

Now about that "excreta" business. If I am not mistaken, for I write from memory, it was not that "Prof. Cook has never seen the dry pellets," but that he has never seen proof that they are the feces of the bee. I cited L. C. Root in addition to Quinby and others as holding the opinion that the "dry pellets" were the excreta of bees. Is it fair to call the evidence of such witnesses "undefined observations," less worthy of credence than his own "careful examinations?"

I am astonished at Mr. H.'s bold assertion that Dr. Donhoff's "subject for analysis was dysentery excreta." It was nothing of the sort, but natural, healthy, normal, ordinary excreta, taken from the rectum of the bee. If therefore it proves anything, it proves just what I stated, that pollen forms part of the food of adult as well as young bees.

Mr. H. tells us that when he uses the plural of majesty, he speaks not only for himself, but for Mrs. H. "and the children." He says, "our opinion is the opinion of all of us." Happy family! If the Heddon family is thus "like kindred drops, that mingle into one"—if he never speaks for himself alone, but always for "we, us & Co.," he has my full permission to use the plural of majesty every time! But I am reminded of a little incident. In a social gathering not 100 miles from where I write, a fond husband remarked that he and his wife had been married, I forget how many years, without ever having a difference. A married lady present exclaimed: "What a dull time they must have had!" But if the entire family is always behind Mr. H.'s pen, he is a more formidable man than the Professor, unless all the Cooks uniformly back up "the head of the house!" Plainly I have not "trembled" enough, and must try to feel more awed in future.

"What ails Mr. Heddon?" I wish I knew. It seems to me that pollen or something has turned sour on his stomach toward me. I would like to sweeten him up if I knew how. But I can't say I believe what I don't, even to make him good-natured and pleasant. If I have ever said an unkind, harsh, or disrespectful word of

him or to him, I take it all back, apologize for it, and metaphorically "smoke the pipe of peace" with him. Listowel, April 15, 1882.

For the American Bee Journal.

Review of the Dzierzon Theory.

DR. WM. R. HOWARD.

Judge W. H. Andrews wishes me to tell the readers of the AMERICAN BEE JOURNAL, whether I think that the "Dzierzon Theory" necessarily follows from the establishment of the much cherished idea of parthenogenesis.

The Dzierzon theory is a series of propositions, 13 in number, being a full elucidation of scientific bee-culture, and is ably defended by the Baron of Berlepsch, who adduces many unquestionable facts in their support. Propositions Nos. 8, 9, and 10 having direct reference to the production of drones, are the principal ones relating to parthenogenesis, the subject now under consideration. Proposition 9 is as follows:

"All eggs germinated in the ovary of the queen develop as males, unless impregnated by the male sperm while passing the mouth of the seminal sac or spermatheca, when descending the oviduct. If they be thus impregnated in their downward passage, (which impregnation the queen can effect or omit at pleasure), they develop as females."

This proposition contains the most peculiar and characteristic feature of the Dzierzon theory. The Baron of Berlepsch, from his interesting experiments, came to the following conclusions in 1855: "Common queens fecundated by Italian drones produce mixed or hybrid workers indeed, but pure common drones, exclusively".... "Still," says the Baron, "the demonstrative scientific proof of its correctness was wanting." By the aid of Profs. C. T. Von Siebold and R. Leuckart, he was able to "demonstrate the presence of spermatozoa in female eggs and their absence in male eggs—thus solving the interesting problem scientifically, and settling the question."

I will now quote proposition 10:

"If a queen remain unfecundated, she ordinarily does not lay eggs. Still exceptional cases do occur; and the eggs then laid produce drones only."

That these exceptional cases are more common than was formerly supposed, is evident. This proposition has direct connection with parthenogenesis, and if we admit the following proposition we admit the parthenogenesis all the way through:

Prop. 8. "The ovaries of the queen are not impregnated in copulation; but a small vesicle or sac which is situated near the termination of the oviduct, and communicating therewith, becomes charged with the semen of the drone."

Many careful observers, sufficiently competent, have come to the same conclusions that the Baron of Berlepsch did in 1855; viz: that fecundation, pure or impure, does not affect the drone progeny, regarding its purity. L. L. Langstroth, L. C. Root, the late and lamented M. Quinby, A. I. Root, A. J. Cook, King and others teach this; and all offer the proof contained in the above propositions.

On the other hand we have many

careful and practical experimenters who, setting aside all theories, bring up evidence which in its nature is irrefutable, and cannot be explained by the Dzierzon theory. For instance it is held by them that the male and female progeny are alike influenced by fecundation; which the theory might allow, but its best and ablest advocates deny.

As Mr. Andrews wishes to put some one "on record," and claims that the writers on the subject will not do so, for his benefit, I will give him my views, not that I wish to have any controversy with him or any one else, but that he has asked it of me in a polite manner, and I have not refused.

I have read the Dzierzon theory, and have carefully examined it, with the Baron of Berlepsch's experiments, and taking it as a whole, it is the most practically scientific work for so few pages that I have ever examined. There never has been such a series of experiments given to the public, so interesting, so exhausting, or so expansive; if we will except our own L. L. Langstroth, of this country.

I may make some statements that do not seem in keeping with a believer in the Dzierzon theory, yet if I am skeptical I will give my reasons as well as possible.

That a fecundated queen is only enabled to produce worker eggs, and that this fecundation or fertilization is the only advantage gained by sexual union, over her virgin power and usefulness, I must say that I do not recognize as a fixed fact, for several reasons, some of which I will briefly state:

A drone-egg laying or unfecundated queen, like a laying worker, deposits her eggs promiscuously in both drone and worker cells, sometimes hundreds in one cell. These eggs are disposed of very irregularly from base to the extent of the side-walls, there is not that systematic arrangement, which marks the work of a fecundated queen—the brood in a compact circular cluster. She does not always examine the cell before depositing the eggs, and will often deposit a score or more in the same cell without changing her position; her position while depositing is not like that of a fertile queen, almost any position suits her, while a fertile queen invariably assumes one position every time she deposits an egg, so far as my observations have been extended, and that position, after carefully examining the cell, she turns herself obliquely across the comb the head inclined downward, to the right or left, at the same time curving her abdomen, introducing it into the cell, withdrawing it in about 5 seconds, leaving the egg firmly attached to the base of the cell. The drone-egg laying queen and laying workers are not jealous rivals, neither will these queens engage in combat with each other as readily as they once would have done. Virgin queens are rivals until they have completed their wedding tours. I have had four of these queens and I don't know how many laying workers all living peaceably in one

hive, all having free access to the same combs at the same time. The conditions of these individuals are the results of circumstances—influences of early life.

A virgin queen after having made several unsuccessful bridal trips, gradually loses her sexual propensities, and toward the last fails to attract her aerial gallants, which under ordinary circumstances are so quick to respond, and after a time she ceases to sally forth, and settles herself to become, if she ever lays at all, a drone mother, a useless incumbent in the hive, with no maternal cares, short lived, even if allowed to run her course. The ovaries are undeveloped; the spermatheca a useless appendage, without muscular power, finally becomes solid. The ovarian nervous ganglion diminished in size forms a mere apology for what it once was, or might have been. She displays neither gracefulness in motion, magnitude, instinct or regality. Her progeny are subjects of "agamie" reproduction, living individuals produced without the congress of the sexes—parthenogenesis.

A fecundated queen deposits her eggs in regular order, except, sometimes when a young queen first begins to lay, she may occasionally deposit 2 eggs in one cell,* and in rare cases drone eggs in worker cells, which is accounted for by some authors in this way: That the muscles of these delicate organs are not well practiced, or sufficiently developed by training to give the queen the proper control of them, which she afterward acquires. I have noticed that a young queen commencing to lay did not as carefully examine the cells before depositing, as older queens, and sometimes I have noticed her to examine one cell and lay in another, as if by mistake, and this I had supposed to be the cause of the frequency of 2 eggs in one cell. It has been stated that queens deposit their eggs promiscuously, and that the workers—nurse bees perhaps—remove them and systematically arrange them, and one isolated case is cited to justify the assertion; yet, as above stated, a fecundated queen deposits her eggs with precision. As the young fecundated queen increases in age, she gradually increases in size, assumes a graceful appearance, exercises a seeming maternal judgment, as her cares increase, deposits eggs more or less according to the influx of food or necessity requires, always provident of the future welfare of the colony by never leaving it hopelessly queenless when accompanying a swarm. [Who ever heard of a drone-egg laying queen exercising any of these traits?] She has respectability among her subjects, and allows no rivals.†

It will be seen that fecundation not only qualifies a queen to lay worker

* I have noticed cases wherein a good vigorous queen has deposited 2 eggs in one cell when a natural swarm had been placed in an empty hive, and only constructed a few square inches of comb, and it yet unfinished.

† I have in a few rare cases observed 2 queens, in well regulated colonies, dwelling amicably together.

eggs, but causes a complete development of the generative organs. The ovaries enlarge, the spermatheca performs its office of fecundating the passing ovum at will. The ovarian ganglion retains a healthy appearance. In fact a complete development of all the animal tissues in the anatomy of the queen bee, giving her longevity, energy, strength, prolificness, complete maternal instinct, in a word, perfection, is but the result directly or indirectly of fecundation.

I will here state that I am unable to prove from my own extended experiments with bees that the drone progeny of a fecundated queen is not influenced by impure mating; as I have on several occasions noticed hybrid drones from black queens, as well as hybrid drones whose grandmothers gave as pure well marked a progeny as any I ever had. One case in point I will relate. I bought from Judge Andrews last year in May, one Italian queen whose worker progeny were all well marked; at the same time I obtained a sealed queen cell from the same hive, and three others from as fine bees as could be found in the Judge's yard—which he could vouch for as being pure—three of these cells hatched as beautiful queens as any one would wish to see—the fourth cell never hatched. Two of these queens were mated with black drones, one of which was from the cell obtained from the queen I purchased. The third queen was purely mated, and gave a well marked progeny. The first two produced hybrid workers and occasionally a black drone, yet the most of their drone progeny were well marked Italians. This strange exception might be accounted for by the variation of individuals of the same species and as the Italian bee is not generally recognized by naturalists as a distinct species of *Apis*, but a climatic variety of *Apis mellifica*, it may yet turn out that these occasional outcroppings of impurity are the result of progenitive inheritance.

I am of the opinion that the subject is one of much importance, and needs further investigation, and that many theories, hypotheses, etc., will rise and fall, before anything like a definite conclusion will be arrived at, upon which all may agree.

Kingston, Texas.

For the American Bee Journal.

Italianizing Cyprian Bees.

EDWARD P. ABBE.

In 1880 I received from Mr. Jones one of his imported Cyprian queens, early enough to rear one forced queen in the fall—and a very handsome one she was—a duplicate of her mother, prolific and long-lived. She is a reigning beauty now.

During last summer I reared about a dozen other queens from the imported one, when I lost her by carelessness. All of these young queens were very nearly, if not quite, duplicates of each other and of the old one. These gave me an opportunity to test

some of the qualities of full breeds and of the half breeds—i. e., half Cyprian and half Italian. There is no need of my mentioning that the pure Cyprian is a cross, active, industrious, prolific beauty; for all, or nearly all accounts agree upon these points.

For one whose only object in the apiary is the pleasure derived from it, the Cyprian is, in its purity, a calamity. But with the mixture of Italian blood to quiet down the rampant growth of Cyprian spirit, I think they are a blessing, for they infuse a new and pure blood, increase the fertility and tendency to late breeding, and fix more certainly and permanently the characteristic yellow band, adding beauty and grace to the whole apiary. This is my experience, and I for one am not sorry that I have tried them; but very glad to have got through with the trouble and stinging labor of this infusion of new blood. I had, for the past 10 years, devoted my apiary of 20 colonies to perfecting a strain of Italians, until it was as good as I think Italians could be made. The bees were large, industrious, three-banded, beautiful, gentle, and easily handled, but there was a strong tendency to lose the broad yellow stripes and run into what are called "dark Italians." If I have checked this tendency, and have fixed the characteristic bands of the Italian more permanently, I am satisfied. I shall now breed back again to gentleness.

New Bedford, Mass.

For the American Bee Journal.

Extracted Honey—No. 3.

JAMES HEDDON.

The upper story spoken of in our last article (No. 2), on page 55, has a capacity of 40 to 50 lbs. of honey, net, and it will probably be a week or more before it is necessary to examine the supers. Then go to your strongest colonies and remove the covers (and right here allow me to say, that the great secret of successful and speedy subjugation of bees depends upon giving them the first blast of smoke before they have had time to "think twice," after you make the first jar), and smoke down the bees, look at the tops of the combs, and the one that looks the "fattest" and brightest (usually near the center) will contain the most honey; lift this one, and look at it, then one near the outside, and you will form a close estimate of the amount of honey the super (that part of the hive which contains the surplus) contains, and the speed of development, within the super. Your register shows the date at which the bees commenced to work in the upper frames. Suppose you have found the super $\frac{1}{4}$ full, just set your "amount pin" to $\frac{1}{4}$, and the date pin to the date, and so on over the apiary.

The 10 or 20 colonies most advanced, will need looking at again in 5 to 8 days, and even less, if the rate of the flow is rapidly increasing. When the time has arrived, your registers show

you a rod or two away, which are the 10 colonies out of your 50 or 500 that need looking at. Upon examination, if none are quite ready to extract, it is a safe rule to go by, that none in the apiary are. But if, on the other hand, many of these 10 colonies need extracting, look well to the next foremost turned pins, as soon as the job is done, and follow this method of search and work through the year.

But a much disputed point arises as to what condition the super must be in, to warrant the emptying of it. Messrs. Dadants, who are good authority, believe in having all the combs sealed or capped over before extracting the honey, and more than this, they believe in letting it stand on the hive, lifting it up, and placing another set of combs under it, and so on to the end of the flow, until that flow is over, as they think that on the hive is the best place for the honey to "ripen," or take on that smooth, rich, oily condition. On the other hand, as good authority as Prof. Cook says there is no need to wait for the capping over of honey. The Professor has the facts, that the waiting process involves increased capital and labor upon this side of the argument. All the Dadants have to sustain their side of the question is, that with their process, the honey is of much better quality.

I have thoroughly tried both plans, and if the honey taken is to be consumed as sweet sauce (as most of our surplus now is, the minority being used for manufacturing purposes, as yet), I stand strongly on the Dadant side of the argument. Their words sound as if they came from experience, and from those who depended upon the favor shown their goods, for their success, viz: the specialist.

I will say that if you have the combs, use the tiering up plan of the Dadants. It is good. I have tried it more years than one. It gives you more time to do your work in; you need not rush because the season does; if you use this plan, at the end of the white honey flow remove all your supers, just as you would boxes or cases of sections, smoking down the bees, and carrying your supers into your room prepared for "getting bees out of boxes," and when the few adhering bees have gone, you can uncap and extract the combs at your leisure. But on the other hand, if your combs are scarce, or you are just making them from comb foundation, and you feel that your capital will not warrant the making so many the first season, prepare yourself with a light box, with tight bottom, and the size of the hive, with a cloth lid, and convenient handles, put 6 combs or frames of foundation in it, and approach the hive to be extracted from. The tools I carry are a heavy I X L knife, smoker and turkey quill. I open the hive, smoke down the bees all I can quickly, and then trade combs with them, taking the 6 fullest ones out of the 7, and brushing all clean of every bee. Thus I open and close the hive at one operation. The condition of the 6 combs is this: The honey is partly sealed; the sealed places are

those spots farthest from the septum, and, fortunately, the easiest to uncap.

The one comb left is hardly fit to extract, and is the odd comb that saved the bees from being crowded and idle; the 6 will make just 3 pairs, and 3 whirled, and contain a very good article of nearly ripened honey. Of the ripened condition of this "throw" much will depend upon the stage of the blossoming, and state of the atmosphere. Blossoms yield the thinnest honey at first, and richest at the close, even to the "strippings." One thing is sure, you cannot wait till the honey in the super is all sealed, without losing the filling of a second super, unless you adopt the tiering up plan, spoken of at first.

Sometimes you will find brood in all stages in your super combs. There is a slow, continuous motion of the crank that will throw out the honey, but not the brood, and this motion, which only experience can teach, must be adopted for broody combs.

I very frequently receive letters and postal cards inquiring if drone comb is not best for sections and super frames, to which I always answer, No. One of the blessings that comb foundation has brought to us, is the fact that by filling the brood frames of the hive full of it, we get rid of a class of consumers called drones, and at the same time get almost complete control over fertilization. In doing so, we are working against the instincts of the bees, and the queen, anxiously looking for drone cells, will be sure to go into your surplus department to deposit eggs if you have drone foundation above, and a proper lack of it below. Experience must drive every drone foundation mill back into type metal.

As soon as your extractor contains all it will hold below the frame, draw off at the gate, into one gallon stone crocks, which should be piled up on each other about 6 to 8 feet high. If pieces of wood $\frac{1}{2} \times \frac{1}{2} \times 6$ inches are laid across the tops of the crocks (2 to each crock), the spaces thus made will allow of a circulation of air that will allow of improvement of the honey as it stands. The honey house should be dry and airy, and thoroughly screened against bees and flies. Do not forget that you will have a damp air in a cool room. Cool air (as in double-wall houses), like a cool pitcher of ice-water, drains dampness. With this third article of general remarks, I will close what I have to say about extracting honey, for the present.

In regard to marketing it, I have never adopted a course that I think as good as the one laid down in Dadant's book.

The uses for extracted honey are encouragingly on the increase. It is already used as a table food, confectionery, in medicinal syrups, manufacturing tobacco, wines, liquors, mead, metheglin, soda water, printers' rollers (entirely supplanting sugar syrup), cakes, pastry, preserving fruits in natural state, jellies and jams, medicinal syrups, ointments, salves for sores, cures for asthma, indigestion, see "Honey as Medicine;" licorice, egg-foam, vinegar, rose honey,

table syrups, and many other purposes.

And now in closing let me say, while you should not build "air castles" and dream of "cisterns full of honey," you should know that just at rare intervals during good honey seasons, the gathering powers of some colonies are great; that Hosmer reports 53 lbs. of extracted honey in one day; Gallup 60 lbs., and I had 30 lbs. gathered in the same period of time, all from the basswood—the bee-keeper's friend.

Dowagiac, Mich.

For the American Bee Journal.

Rearing the "Best" Bees.

W. Z. HUTCHINSON.

I have been much interested in the "best bees" controversy, and cannot refrain from a few remarks on the subject. In all this broad land there is probably not one bee-keeper who does not wish for the best bees, the difference of opinion being in regard to which are the best bees, and how to obtain them.

As to which are preferable, the light or the dark Italians, I will say that I have tried both, obtaining them from a dozen different sources, and I unhesitatingly pronounce in favor of the dark, leather-colored Italians. I consider the light-colored bees a trifle easier to handle, but the dark bees are so much more energetic, and store so much more honey, that I am more than willing to overlook any of their little outbursts of temper.

My experience with hybrids is as follows: I commenced bee-keeping with black bees in box hives, but the bees did not long remain in box hives. Located within a mile of my place were two Italian apiaries, and one-half of my young black queens mated with Italian drones. From what I had read I expected that there would be some "fun" in handling these hybrids, but, to my astonishment, they proved to be more amiable than the blacks. I have seen some pure Italians that were more irascible in their disposition than were the hybrids. In the fall I sold three of these hybrid colonies, and with the proceeds bought queens and Italianized my whole apiary. The next year I bought an imported queen, reared queens, and Italianized all the black bees within three miles of my apiary. Of course, some of my young Italian queens mated with black drones, and they produced hybrids that—well, I took back all that I had ever said about book-makers not knowing what they were talking about when they said that hybrids were "cross." To go back a little, the three hybrid colonies that I sold, those having the black queens mated with Italian drones, outstripped my Italians. Of course, I attributed this to the difference in location (the locality really was an excellent one), but the next year the owner of the hybrids had his whole apiary Italianized, and since then, a period of three years, he has never had the yield of honey, nor in-

crease of colonies that he had the first year with the hybrids.

Will Mr. Heddon, or any one else who knows, say whether these hybrids can be bred in-and-in, and their good qualities be preserved at the same time, or must the strains be kept up by a continual crossing of the pure races?

Mr. Editor, you may have different views from myself upon the "dollar" queen business, but when you say: "The 'best bees' will have just the requisite number of stripes, whether it be one or a dozen," we agree exactly.

Rogersville, Mich.

For the American Bee Journal.

More About Bellows Smokers.

J. H. MARTIN.

Every bee-keeper, if familiar with the history of the smoker, is ready to accord to Mr. Quinby the honor of putting upon the market the first bellows smoker. Every subsequent original inventor found the bellows, the valves, the fire-tube and the wind. It is a mystery to not a few, what subsequent inventors could claim as original. The mystery is explained by the claim that some punched a hole and let in air, where air could not get in before. Mr. Bingham has enlarged this hole to a space between the bellows and fire-tube, and there you have the original smoker. We have no doubt but that this point can be legally protected by a patent, for as trivial things have often been passed upon as improvements, and worthy of a patent as this. For instance, an inventor improved letter envelopes by inserting a thread across the end of the envelope, one end of the thread projecting so as to be taken between the thumb and finger and the envelope easily torn open.

Another inventor grasped the brilliant idea that a knot in the end of the thread to give a firm hold, was a great improvement, and applied for a patent, which was granted upon the ground that it was an improvement over the previous method. Now suppose our last inventor of the knot had proclaimed himself as the only original inventor of the envelope for letters, he would have been no more unreasonable than for the inventor who punched the hole to claim that he is alone the original inventor of the smoker. Neither can any one claim to be the inventor of the first successful smoker, for we used one of Quinby's first smokers and it was a great success for a new invention. Since then we have used various so-called improvements, some of which were no better than the first Quinby.

We wish to exercise due charity for all, and accord honor for all improvements where honor is due, but when the man who tied the knot in the end of the thread claims to be the original inventor of all envelopes, we have a right, as a letter writer, to protest against so broad a claim.

Hartford, N. Y.



Local Convention Directory.

1882. *Time and Place of Meeting.*
 May 11—Champlain Valley, at Middlebury, Vt.
 T. Brookins, Sec., East Shoreham, Vt.
 16—N. W. Ill. and S. W. Wis., at Rock City, Ill.
 Jonathan Stewart, Sec., Rock City, Ill.
 25—Iowa Central, at Winterset, Iowa.
 Henry Wallace, Sec.
 June 3—Hart County, Ky., at Woodsonville, Ky.

In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

For the American Bee Journal.

Central Michigan Convention.

The Central Michigan Bee-Keepers' Association met at Lansing, at 10 a. m., April 20, and was called to order by President Ashworth. E. N. Wood was appointed Secretary *pro tem.*, and 22 names were added to the Association.

In his annual address the President alluded to the mutual benefit derived by interchange of thought at the meetings, and also spoke of the importance of providing bee-pasture, especially in Lansing where there are so many bee-keepers in such close proximity. He urged bee-keepers to provide for larger exhibitions of the products of the apiary, and presented a tabulated statement of those products for 1881.

Reports and estimates show that about 120,000,000 lbs. of honey were produced in the United States last year. At 12 cts. per lb. this would amount to \$14,400,000.

An interesting discussion ensued on the topics suggested in the address.

The following officers were elected for the ensuing year:

President—Rev. J. Ashworth.
 Secretary—E. N. Wood.
 Treasurer—Mrs. T. Harris.
 Vice Presidents—Mrs. S. J. Gibson, Clinton; W. O. Wilson, Ingham; James Frye, Jackson; E. W. Lowe, Ionia; C. Clement, Livingston; E. Curtis, Shiawassee.

An opportunity having been given, a number of bee hives, section boxes and other apiarian supplies were exhibited, and also an ingenious device by Prof. Cook for measuring the length of the tongues of the different races of bees.

E. N. Wood read an essay on the "Bee Hive," describing various styles, and especially the hive manufactured by Narmore & Wood, of North Lansing.

A discussion of the merits of the Cyprian bee was led by J. Harper, after which Prof. Cook was called on for an address on the "coming bee." He did not decide positively from which race the "coming bee" would spring, but earnestly assured the Convention that the dollar queen trade would not hasten its approach.

A resolution to make a large exhibit of apiarian products at the Central Michigan Fair next fall was adopted unanimously; as was also the resolution offered by Prof. Cook making the President and Secretary a committee to request the agricultural society to provide a building for this object. The Society then adjourned to meet on the Tuesday preceding the autumn fair. REV. J. ASHWORTH, Pres.
 E. N. WOOD, Sec.

Hagerstown (Md.) News.

Md., Va. and W. Va. Convention.

A number of bee-keepers of these States met at Hagerstown, Md., on April 20, and organized the Union Bee-Keepers' Association of Maryland, Virginia and West Virginia. Mr. D. A. Pike, of Smithsburg, was chairman, and J. Luther Bowers, of Berryville, Va., Secretary.

Messrs. J. F. Brown, of Winchester, Va., S. Valentine, of Double Pipe Creek, Md., and Wm. Anderson, of Harper's Ferry, W. Va., were constituted a committee to select a name for the Association, who reported the name as above given.

The organization was perfected by the election of the following permanent officers: D. A. Pike, Smithsburg, Md., President; J. L. Bowers, Berryville, Va., Secretary; A. Burton, Harper's Ferry, W. Va., Treasurer.

It was resolved to hold the next meeting of the Association in this place on some day, to be named by the President, during the Washington County Agricultural Fair, the coming fall.

Messrs. A. Burton, J. F. Brown and S. Valentine were appointed a committee to draft a constitution for the Association.

It was determined that, at the next meeting, each member exhibit something to the apiary.

Various subjects connected with bee-culture were discussed, among them, "The best way to get surplus honey," "The best method of queen rearing," and "The best method of transferring bees." The discussion elicited many new ideas on the subject of bee-culture, and much important information was imparted by this interchange of views.

A bee-keepers' convention will be held at Richland Center, Wis., on May 4th and 5th. All interested are cordially invited.

The Champlain Valley Bee-Keepers' Association will hold their semi-annual meeting at Middlebury, Vt., May 11, 1882. T. BROOKINS, Sec.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or \$8 per 100.

Those who may wish to change from other editions to the Weekly, can do so by paying the difference.

SELECTIONS FROM OUR LETTER BOX

Artificial Comb Honey.—Mr. Bright, editor of the *Christian at Work*, and myself, have had some correspondence on artificial comb made of paraffine, etc., in the course of which he stated that he had seen the artificial comb. I called the attention of Mr. A. J. King to it, and also denied his statement. Mr. King offered Mr. Bright \$50 for proof that he was right, and the latter sent me a postal half way admitting that it was comb foundation that he saw. All this I believe Mr. King intends to publish in the May *Bee-Keepers' Magazine*. Mr. Stanley's article from the *Empire State Agriculturist*, printed on page 244 of the BEE JOURNAL, has a very good paragraph on the impracticability of making comb artificially, and I wish to send a marked copy of the article to Mr. Bright, as a sort of "parting shot" aimed at his erroneous statements. He probably thought artificial comb and comb foundation are one and the same thing. He is undoubtedly wiser now than when he wrote the article last February. ZOPHAR MILL, JR.
 New York, April 26, 1882.

Glucose.—To say that the above never candies, is a mistake. Some time ago I saw 100 bbls.—2 car loads—returned to the factory because it had so thickened that it did not run out the barrel. I have also seen it thickened in glass jars put up with comb honey to be sold for pure honey. To tell, therefore, that all candied honey is pure would lead to a wrong opinion. We had hard frost here several nights after a week or more of warm weather, when the thermometer was up to 86° in the shade. Much injury, of course; but I hope the white clover was not killed here last summer, when we had no rain for about 2 months, and the heat up to 156° in the shade; it is said that clover does not give honey the first year. T. HULMAN, SR.
 Terre Haute, Ind.

Very Encouraging.—Our bees are in fine condition, and things look promising for the coming season. We have had the same weather you describe in the last BEE JOURNAL, and it still continues. The fruit is somewhat injured, but not nearly all killed. My bees are working finely to-day, and the combs are filling up nicely with capped brood, the drones are also hatching, and some of them flying.

W. B. SPENCE.
 Sidney, O., April 24, 1882.

Three Weeks Ahead of Time.—I had a fine swarm of Italian bees the 21st of April. My bees are three weeks ahead of any year I ever had them—now twenty years.

L. T. MOBBERLY.
 Long Grove, Ky., April 24, 1882.

Snakes Eating Bees.—I read with a great deal of interest that article in your last paper by Prof. C. F. Kroeh on the parthenogenesis of bees. I hope Prof. Cook, Mr. G. M. Doolittle, and some of the other big guns will favor us with their views on the subject. Bees here are doing well, in spite of the water, which has ruined most of us—that is all but those which were placed upon sheds and rafts before the water came up. The snakes, however, are devouring great numbers of them. I should like to know whether they eat them for the honey?

T. K.

Point Coupee, La., April 20, 1882.

[They probably eat them for the same reason they devour flies, snails, and other insects.—ED.]

My Early Work.—Bees are booming, gathering honey rapidly from horsemint and various other flowers. I have one of Root's chaff hives, with 80 1-lb. sections on it, and about half a bushel of bees in it, if they were dead and measured. About half the boxes have been partly filled with new honey for nearly 2 months. A few rainy days causes the bees to draw on the sections to feed the brood and larvae in the lower story; for there has been but very little space in all my hives; that is, the lower story, for nearly 3 months for honey, it being so completely filled with brood. I notice in the BEE JOURNAL of the 29th ult., that Mr. J. W. Eckman, of Richmond, Tex., wants to know "what it was that my bees were getting so much honey from, that I could extract so early?" Now, I did not say that I was going to extract a barrel of new honey, but I did extract some new honey, just as I said I would, and I believe it was gathered from fruit blossoms. If Mr. E. will come up and spend a day or two with me, I think I can show him how I get my bees in a condition in very early spring to take advantage of the first flow of honey from any source. I do not want over 1,000 cubic inches of comb in the brood-nest, a *la* Doolittle. I use two styles of frames, the Langstroth $9\frac{1}{2} \times 17\frac{1}{2}$, and a nucleus frame $9\frac{1}{2} \times 12\frac{1}{2}$. I use 7 of the former and 8 of the latter in the brood nest. In early spring, that is, as soon as I see a little white comb along near the top-bar, I raise the two outside frames, spread from the center of the brood nest, making room for the first two frames. This I do about every ten days or two weeks, according to the weather. Continue this way of promoting brood-rearing, and you will soon have the brood-nest so filled with brood that there will be no place for honey; then it is that the bees will put the honey they gather into any thing you may choose to give them; even a nail keg. I do not leave any frames in the upper story in winter, but take them all out, put two thicknesses of old corn sacks on top the brood frames, fill the upper story half full with good dry cotton seed, and if not disturbed during bad weather, nearly the whole force will live through our winters here, besides the

increase during winter that is being added daily. Last fall I had 50 strong colonies. About the last of January I doubled back to 27. I have had to date 26 new swarms (some I have returned), besides about 40 three-frame nuclei, keeping queens until their progeny hatches, and I have done all in my power to keep back all swarms by giving more room, shading, and some tiered up three stories high.

J. S. TADLOCK.

Luling, Tex., April 17, 1882.

Judge Andrews' Lecture.—A subscriber wishes to trouble you with a few notes. Quite an interest is being taken here on the subject of bee-culture. We have a County Bee-Keepers' Association, which meets monthly; the State Association assembles here on April 25th, and our citizens are preparing to entertain all visitors and members free of charge, and last, but not least, Judge Andrews is delivering a course of lectures to a large class, among which are some of our best bee-keepers. The lecturer advises his class to read the books and BEE JOURNAL, but to do their own thinking. He is especially severe on so-called moth-proof hives and vendors. The lecturer admits the theory of parthenogenesis, and rejects the "pure mother, pure drone theory." He says the male of the bee, as in other life, impresses his characteristics more strongly and clearly on the offspring than the female, and impressed on his class the importance of the pure-blooded drone. The lecturer dwelt at length on the queen bee, illustrating his subject and exhibiting specimens from his apiary at every stage of life, and wound up his last lecture on the queen by giving his class an opportunity to witness a royal combat. During one of his lectures the Judge exhibited to his class some worked over comb. On several points the Judge differed from the books, but some of these he wished to verify before positive assertion, and lest I report him wrongly, I shall omit them for the present.

A SUBSCRIBER.

McKinney, Texas, April 22, 1882.

Almost a Blizzard.—We have a cold snap on hand now, which has lasted from the 9th to the 23d, and bids fair to reign with winter's rigor still a while longer—a gloomy prospect for my pets. We had a profuse apple and peach bloom, but it was all lost to the bees; they had to stay in to keep the young brood warm. Throughout March the prospect was very fine, but the greater part of April so far has blasted our prospects. I have been feeding my bees for two weeks. When it was warm enough for them to venture out, some would gorge themselves, become benumbed, crawl off a little distance, lay up and die, unless caught up and put in a hive, of which class I took up a great many and put in at the top of the hive without any bad results so far as I could see. The first was so severe as to wilt some of the young grape shoots and kill most of the fruit, and fears are entertained that it will fall off yet, though pro-

tected more or less by the fog from the river. We are in a beautiful vale below Louisville, drained of its many ponds, and now very fertile, producing fine hay crops, wheat and corn, and running back to the hills, with fine ridges of sand suitable for gardening purposes, grapes, melons, cantaloupes, etc. Along some of the smaller streams and wet places grow some of the asters and goldenrods. I have about one acre sowed in sweet clover and mignonette, some of which is looking very fine; I have also sowed some Alsike clover, and about one acre in white mustard. This fall I will sow 5 or 6 acres in sweet clover, and in the spring sow the same in mignonette. I wish to treat my pets well. I have now 37 colonies. No swarms yet, though in March I expected a good many ere this time. I have some now which from all appearances, will swarm as soon as the weather will admit of their doing so. We have a fair prospect for a good locust bloom, should the weather get warm enough for the bees to gather it; if not, woe to the bees. I have contracted 15 colonies to a man in Louisville when I have them, and will sell more if I find a purchaser. Success to the BEE JOURNAL. I would give up the business if it was not for it. I gain all the information I need from its pages.

G. W. ASHBY.

Valley Station, Ky., April 23, 1882.

Preparing Pasture.—We have 77 colonies to commence spring work with. The most of them are strong for this time of the year; 50 of this number we bought this spring from neighbors that wished to dispose of their bees. The weather is very unfavorable at this time, cold and rainy. Bees cannot fly. Cherry and plum trees are in bloom. We want a little sunshine to make us and the little workers happy. We have sown two acres of alfalfa for forage, and intend next season to sow Alsike. We sell our extracted honey readily for 15 cts. per pound. Every one that comes to get honey wants to see the extractor; it is a great curiosity to them. When we extract they are coming to see the honey taken out of the combs.

MRS. C. M. KINGSLEY.

Elvaston, Ill., April 24, 1882.

Bee Notes from Kentucky.—Bees in Kentucky are in fine condition. We have an encouraging outlook. I have lately attended a meeting of the Barren County, Kentucky, Bee-Keepers' Society; we had a good meeting, and all seemed in good spirits. I also attended a meeting of the Hart County Bee-Keepers Association, at Munfordville, Ky., and assisted in organizing a county association. We had a large attendance and organized a society that promises to do much good. The next meeting will be on the first Saturday in June, at Woodsonville, Hart County, Ky. We hope all the Vice Presidents of our State Society will call meetings in their localities and organize. We have not yet fixed the time of the State meet-

ing at Louisville, but are waiting for the time of the North American Bee-Keepers' Society to be fixed at Cincinnati, as we want to meet just before that, so that we can go right on to the National Convention.

N. P. ALLEN.

Smith's Grove, Ky., April 24, 1882.

Care of Comb Foundation.—What is the proper method of treating comb foundation which has been kept over since last year? Should it be softened by heat, and if so, to what degree of warmth should it be subjected?

E. R. BULLER.

Campbellford, Ont.

[Hang it, one sheet at a time, in a strong colony. The bees will heat it to the proper degree for working. No criterion can be given for heat, as some makes are harder than others, and age and exposure will affect it differently.—ED.]

An Error.—I was in error in giving the size of my frame in the BEE JOURNAL, of April 12, page 235. It should read $12\frac{3}{4}$ inches in the 10th line, instead of $12\frac{1}{2}$ inches, so as to take 3 one-pound sections each way.

Benmiller, Ont. PETER FISHER.

The Industrial Exposition in Denver.

—Colorado is fast taking rank with the older States of the Union in the matter of bee-culture, and before another decade, no doubt, it will be an important industry in this State. There is no method at present of gaining valuable statistics in regard to the extent of the business, but if such information could be obtained, people in and out of Colorado would be astonished at its magnitude. This is especially gratifying; the more so, because it has only been a few years since there was no bee-culture of any importance in the State. To have accomplished the results as at present existing, in so short a time, is a magnificent tribute to the energy and progressive spirit of our people. Bee-culture is being recognized as an important factor in the commerce of the country, and if properly fostered and encouraged, will soon grow to large proportions. A bee-keepers' association was organized in Denver, Dec. 15, 1881, consisting of 20 members, who owned 425 colonies of bees; but this is scarcely a shadow of the number owned in the State at large. The programme of the first annual exhibition of the National Mining and Industrial Exposition, to be opened the 1st of August, 1882, has just been issued. Space for exhibits is offered free of charge. Every industry in the country will be represented. Dairying, agriculture, floriculture, horticulture, apiculture, manufacturing, household goods, ornamenting, the arts, food and medicinal preparations, will be exhibited in abundance. People from every nation will visit the Exposition this summer. Excursions are being arranged on all roads. The best place to invest a small capital is in some of these Western States and

Territories. Colorado, Wyoming, New Mexico, Utah, Idaho and Montana are the poor man's paradise.

WOMAN'S INDUSTRIAL ASS'N.
Denver, Col., April 18, 1882.

Last Year's Record.—Last spring I started with 7 colonies in old box hives. On the 16th and 17th of May I transferred them to movable frame hives, filling 6 frames for each hive with comb and brood, and some honey, leaving a surplus of about 100 lbs. of honey; fed back about 20 lbs.; increased to 31 colonies, and obtained 250 lbs. of honey. They have come through the winter splendidly; wintered in the cellar; lost 2 by spring dwindling. They have been carrying in pollen; had a swarm April 4—earliest ever heard of here. Am feeding them. As a subscriber to the BEE JOURNAL will ask, can I expect to bring them through and how, as the weather is too cold at present for them to fly, and little yet in bloom but willows. Am looking with bright hopes for the present year with my busy bees, with the aid of the welcome JOURNAL.

S. McLEES.

Tuscola, Mich., April 13, 1882.

[Yes; you can easily bring the swarm through nicely. Give them a couple combs of brood from some hive which can spare them, and feed plentifully till fruit is in bloom.—ED.]

Saw Palmetto.—I send you in this mail two flower stalks and one leaf and stem of the saw palmetto; I tried to get an average size, as you will see I have cut off part of the stem of the larger flower stalk. I done it in order to pack it better. I send the small one because it is fully blown, though I fear all the blossoms will drop off before you get it, it is about the smallest stalk I ever saw. I can give you very little data now, as I have never given the matter any attention; later on I think that I will be better posted as I intend to observe closely all the honey plants that are here. I saw the first flower stalks about March 1st, and the same stalks that I saw then are only to-day partly in bloom, so they evidently require quite a while to become perfect. These stalks were evidently the "early" ones, as the great bulk are just in bud. There are from 3 to 6 stalks to one plant—it is a small and weak one that produces less than 3. On the large and thrifty plants the flower stalks are from $2\frac{1}{2}$ to 3 feet in length, with numerous lateral branches, making an immense mass of blossoms. As to the length of time that it remains in bloom I cannot say, nor its value as a honey plant. I will observe these points and write you later on. I examined the colonies yesterday, but found no increase of honey. Judging from the length of time that the bloom requires to open, I think there will not be much gathered before May 1st. I am a novice in the business, having never even opened a bee hive until a couple of months ago, so that I am not overflowing with bee lore, but any information that I can give you I will cheer-

fully send. Should any question occur to you that I have not answered, please write me and I will do my best; when cabbage palmetto blooms I will send you all the data that I can. If the bloom is lost or spoiled so that you cannot use it, advise me and I will send you again.

W. H. STEACY.

Tampa, Fla., April 10, 1882.

[The saw palmetto stalk and flower came to hand, and Mr. Steacy has our thanks for the same. Much interest has been felt regarding Florida for apiculture—its climate, soil and spontaneous bloom—and any information on the subject will be highly appreciated.—ED.]

California Notes.—The honey season last year came very suddenly, some 2 weeks earlier than the season before, and the bees were just booming at the time of the frost. I had a number of colonies with 2 tiers of sections, but very few perished. At the time the bees got to swarming, I had a considerable number of young queens being fertilized in nuclei, and queens and swarms got mixed (my old queens had clipped wings). I got a bunch of bees that had 6 queens; 1 got killed. They were on a low bush, and more than I could lift. The cluster was full 3 feet high, just clearing the ground by about 1 inch, about 10 inches thick, and about 16 inches wide one way. They filled 3 hives with bees, one of which filled a tier of top sections. I should judge they must have weighed over 50 lbs., possibly 75. The surplus queens I utilized. If my subscription expires before you hear from me, do not stop the BEE JOURNAL—I should feel like a lost sheep without it. I have succeeded in sending queens to Oregon the past season successfully. I find sugar better than honey in shipping queens, but they must have water. A very good bottle is made of tin, with just a little hole. Atmospheric pressure keeps it from leaking. I have sent them with only a cake of sugar and the water. They have to go by steamer. In overhauling my nuclei last winter, I united several, using the cage mentioned in a former number of the BEE JOURNAL. The next day, as the bees were quiet, I released the queen without trouble. I never cut or mutilate the combs. Sometimes the bees will release her. Ordinarily I raise the cage and let them get together, always watching to see if the queen is well received. I am so well satisfied with it, that I shall not look further. I have even introduced virgin queens successfully with it. The form I use is $2\frac{1}{2} \times 3$ inches, $\frac{1}{2}$ inch tin sides, No. 12 unpainted wire cloth. I know of a number of cases where parties had to be shown a queen for the first time, who were successful with it. In breaking up nuclei, I found it very convenient to make an upper story and place the frames with all adhering bees therein; there was no confusion nor quarrelling. Some combs that had chilled brood were entirely cleaned out, and

are as perfect to-day as ever. About half of my hives use the Langstroth frame, but I prefer a frame 15 inches long by 9 deep; the top of the hive will take the Langstroth rack, frames above, in false ends. To save my perfect surplus combs, I have a box, no top or bottom, $\frac{1}{2}$ of one side, with hinges and a bottom, a loose top, with 6 square holes to take the upper story of the hive. The frames hang on false ends $\frac{1}{2}$ inch apart; when full, lay empty burlap sacks on top, and cover on them. Burn sulphur often enough to kill the moths. I have used this method several years, and save the combs. Imperfect combs make into wax. J. D. ENAS.
Napa, Cal.

What Hive to Use.—1. What is the simplest and easiest hive to make and handle for a beginner? 2. Can you give me the dimensions of such a hive, and size of the frames? 3. What kind and size sections to use in said frames? 4. Must the inside of frames and sections be dressed? 5. What is the best prevention against bee moths? I am ranching in Western Texas, and every farmer and stockman has from two to a dozen colonies, but their ignorance of everything pertaining to the bee is truly sublime, therefore I hope you will answer the above questions in the next issue of the BEE JOURNAL. LYNN B. LADD.
Medina, Tex.

[1. Any of the standard hives are simple and easy to handle—either the Langstroth, American or Gallup.

2. Langstroth hive is 18 $\frac{3}{4}$ inches long, by 14 wide and 9 $\frac{1}{2}$ deep, inside measure. Frames are 17 $\frac{5}{8}$ by 9 $\frac{1}{2}$, outside measure. Top-bar 19 $\frac{1}{2}$ inches long.

3. The brood frames hold 8 sections each, 4 $\frac{1}{4}$ x4 $\frac{1}{4}$ inches, called one-pound sections. This hive is also used with a 7-inch cap or cover, and will accommodate 18 two-pound boxes, 5 $\frac{1}{4}$ x6 $\frac{1}{4}$ outside. The standard Langstroth contains 10 brood frames, or 7 section cases.

4. Sections should be, but it is not necessary for the brood frames.

5. Italian bees. If you have black bees, moths will not trouble so much if colonies are kept strong.—Ed.]

First Experience with Italian Bees.—I have kept bees for several years, and never had very good success with them till I was in Toronto, at the exhibition, and by chance came across Mr. Jones, of Beeton, Ont., and had a short conversation with him. The next spring I purchased one of him. The next spring I purchased one of his movable comb hives for a pattern, made new hives and transferred my bees into them. I purchased "Cook's Manual," and made myself acquainted with the management of bees. I then became anxious to get Italians, and bought 8 queens at \$1 each; 4 of them died,

the remaining 4 have done very well. I then purchased 2 more at \$2.50 each. One was dead when received, and the other died 2 hours after introduction. But I was not discouraged, and purchased 6 more queens which all did well, and a healthier lot of bees than they are I think would be hard to find. My bees have wintered well. I wintered in three different styles, and may give my methods in the BEE JOURNAL at some future time.

Stirton, Ont.

J. HAMBLBY.

Queenless Colonies.—After unpacking my bees I find two colonies are queenless, both blacks. One had drones hatched, more capped, and some not capped, but not a sign of worker brood. The drone brood was confined to the drone comb, a patch about 4 by 6 inches, being all the drone comb there is in the hive. I gave them a frame of worker and drone brood from another hive, but they are starting no queen cells. I have been in the bee business some time, but never had anything happen like it. What is the matter?

Bryan, O.

H. HANCE.

[There are two solutions of the enigma: 1st. The queen may have been old or been injured in some manner, becoming a drone laying queen, and killed or died quite recently; 2nd. The queen may have been lost some time ago, and a fertile worker developed. The fact of the drone brood all being in a small piece of drone comb, would indicate that the former hypothesis is correct; while their failure to start queen cells would disprove it, as a fertile worker will deposit her eggs anywhere. However, you can easily determine the matter. Remove the frame with the drone brood, also that which you gave them; then, if you know they have no queen, and eggs continue to be deposited, it is proof positive of the presence of a fertile worker.—Ed.]

Dreary Outlook.—More snow and ground frozen quite hard here this morning, with a cold northwest wind. Bees have gathered no pollen as yet; and do not seem as strong as they did a week ago. I do not know but I shouted "bees in good condition" too soon, for if this weather holds on long it will be hard on their rapidly decreasing numbers.

Borodino, N. Y., April 22, 1882.

LATER:—Our cold weather still continues, and as I write the mercury stands at 18°, and the ground is frozen so it fairly rings as you walk over it. Bees are clustered as close as in winter, and with the exception of winter wheat, our fields look as bare as they did in February. If it does not warm up soon, some of my weaker colonies must perish.

G. M. DOOLITTLE.

Borodino, N. Y., April 25, 1882.

Stray Swarm.—I would like to know what you think of the simplicity hive used on the Langstroth for making a second story, that is, those bevel edges like A. J. Root uses? Are they better than the Langstroth, that has the top to slide over the bottom hive? Do you think they will warp much and crack, so that ants, roaches and moths will get in? Those insects are harbored around my hives too much. Do you advise metal bearings for frames? Poplar and white clover are in bloom, and bees are gathering honey. I caught a runaway swarm to-day. R. H. C. MITCHELL.
Humboldt, Tenn., April 21, 1882.

[The simplicity hive is virtually a Langstroth, and ought not warp much if properly made and painted. The bevel joint between would be a substitute for the square rabbet, and equally good for those who prefer that kind. We do not admire metal bearings for frames; but can highly recommend metal rabbets inside the hives for the frames to hang upon.—Ed.]

Cold in Massachusetts.—Weather has been very cold here for 10 days. Ice has made $\frac{1}{2}$ inch thick for several nights. Very unfavorable for bees and queen-rearing. Early queens reared in New England will be rather expensive to the one who rears them. Some bee-keepers will expect to buy them for \$1, notwithstanding the fact that they will cost \$2. H. ALLEY.
Wenham, Mass., April 25, 1882.

CLUBBING LIST.

We supply the Weekly American Bee Journal and any of the following periodicals, one year, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage is prepaid by the publishers.

Publishers' Price. Club.	
The Weekly Bee Journal,.....	\$2 00.
and Gleanings in Bee-Culture (A. I. Root) 3 00..	2 75
Bee-Keepers' Magazine (A. J. King) 3 00..	2 60
Bee-Keepers' Instructor (W. Thomas) 2 50..	2 35
The 4 above-named papers.....	4 50. 4 00
Bee-Keepers' Exchange (Houk & Peet) 3 00..	2 80
Bee-Keepers' Guide (A. G. Hill).....	2 50. 2 35
Kansas Bee-Keeper.....	2 60. 2 40
The 7 above-named papers.....	6 30. 5 50
The Weekly Bee Journal one year and Prof. Cook's Manual (bound in cloth) 3 25..	3 00
Bees and Honey, (T. G. Newman).....	2 75. 2 50
Binder for Weekly, 1881.....	2 85. 2 75
Binder for Weekly for 1882.....	2 75. 2 50

Premiums.—Those who get up clubs for the Weekly BEE JOURNAL for 1882, will be entitled to the following premiums. Their own subscription may count in the club:

For a Club of 2, a copy of "Bees and Honey."	
" " 3, an Emerson Binder for 1882.	
" " 4, an Apisary Register for 50 Colonies, or Cook's (Bee) Manual, paper.	
" " 5, " " cloth.	
" " 6, Weekly Bee Journal for 1 year, or Apisary Register for 200 Col's.	

Or they may deduct 10 per cent in cash for their labor in getting up the club.

When changing a postoffice address, mention the old as well as the new address.

THE AMERICAN BEE JOURNAL

ADVERTISING RATES.

20c. per agate line of space, each insertion.

A line of Agate type will contain about **eight words**; fourteen lines will occupy 1 inch of space. Transient Advertisements payable in advance. Special Notices, 50 cents per line.

DISCOUNTS will be given on advertisements published WEEKLY as follows, if the whole is paid in advance:

For 4 weeks.....	10 per cent. discount.
" 8 ".....	20 " "
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Discount, for 1 year, in the MONTHLY alone, 25 per cent., 6 months, 10 per cent., 3 months, 5 per cent.

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Advertisements withdrawn before the expiration of the contract, will be charged the full rate for the time the advertisement is inserted.

THOMAS G. NEWMAN,

925 West Madison Street., Chicago, Ill.

Special Notices.

To Advertisers.—By reference to our schedule of rates for advertising by the year, it will be seen that considerable reduction has been made. This, in connection with our large and increasing circulation, makes it advantageous to dealers to avail themselves of its weekly visits to the bee-keepers of America to make their announcements for the coming season's trade. We not only offer the best advertising medium, but the lowest rates on yearly contracts.

A Sample Copy of the Weekly BEE JOURNAL will be sent free to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

The BEE JOURNAL is mailed at the Chicago Postoffice every Tuesday, and any irregularity in its arrival is due to the postal employees, or some cause beyond our control.

We are sometimes asked who our authorized agents are? Every subscriber is such an agent; we have no others, and greatly desire that each one would at least send in one new subscriber with his own renewal.

The Apiary Register.

As the time is now at hand to commence the use of this valuable book, all who intend to be systematic in their work during the coming season, should obtain a copy and commence to use it.

For 50 colonies (120 pages).....\$1 00
" 100 colonies (220 pages)..... 1 50
" 200 colonies (420 pages)..... 2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones to procure at the start.

Binders for 1882.—We have had a lot of Emerson binders made especially for the BEE JOURNAL for 1882. They are lettered in gold on the back, and make a nice and convenient way to preserve the JOURNAL as fast as received. They will be sent postpaid by mail for 75 cents.

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

To any one sending two new Weekly subscribers for a year, we will present a volume of the BEE JOURNAL for 1880, bound in paper covers. It contains much valuable information, and it will pay any one who does not already possess it, to obtain a copy. Many of our new subscribers will be pleased to learn that they can get it for \$1.00, by sending for it at once, before they are all gone.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

We will send Cook's Manual in cloth, or an Apiary Register for 100 colonies, and Weekly BEE JOURNAL for one year, for \$3.00; or with King's Text-Book, in cloth, for \$2.75.

Articles for publication must be written on a separate piece of paper from items of business.

Honey as Food and Medicine.

We have just issued a new edition of our pamphlet bearing the above title. It has been revised and enlarged from 24 pages to 32, the new pages being devoted to new Recipes for Honey Medicines, and all kinds of cooking in which honey is used.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, \$4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

Bees and Honey, or Management of an Apiary for Pleasure and Profit. This is the title of our new book. The first and second editions having been exhausted, and being desirous of having it "fully up with the times," including all the various improvements and inventions in this rapidly increasing pursuit, we have thoroughly revised it, re-writing some chapters and adding several new ones, in order to present the apiarist with everything that can aid in the successful management of the Honey Bee, and at the same time produce the most honey in its best and most attractive condition. Chief among the new chapters are "Bee Pasturage a Necessity," "Management of Bees and Honey at Fairs," "Marketing Honey," etc. It contains 160 pages, and is profusely illustrated. Price, bound in cloth 75 cents; in paper covers 50 cents.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey. This is a new pamphlet of 32 pages which we have just published. At the last meeting of the North American Bee-Keepers' Society, we were appointed on a committee to prepare instructions on the Exhibition of Bees and Honey at Fairs; this is also added to the above. Price, 10 cents.

Constitutions and By-Laws for local Associations \$2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

This one fact is being brought before the minds of the people of the United States: Kendall's Spavin Cure is not excelled as a liniment. 18w4t

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., May 1, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.**CHICAGO.**

HONEY—As the season is well advanced, sales of extracted honey are slow and prices remain unchanged. 1 am paying 8c. for dark and 10c. for light, cash on arrival. Good comb honey is scarce and rules high.

BEESWAX—I am paying 24c. for good yellow wax, on arrival; 18@22c. for medium grade, and 15@17c. for dark.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—The demand for comb honey is slow, and prices nominal at 16@20c. on arrival. Extracted honey is in fair demand. Our jobbing prices for 1 lb. jars of clover honey are, per gross, \$25; for 2 lb. do., per gross, \$42. The demand for manufacturing purposes is very good. We pay 8@10c. on arrival.

BEESWAX—Brings 18@22c. The demand exceeds the offerings.

C. F. MUTH.

Quotations of Commission Merchants.**CHICAGO.**

HONEY—The demand for honey is light, most of the trade finding fault with the best offered, as it is more or less candied. Values are not steady, prices being made to meet the views of the purchaser.

BEESWAX—Scarce, and in demand at 23@25c.

R. A. BURNETT, 165 South Water St.

CLEVELAND.

HONEY—Our honey market would be good, as there is considerable inquiry for white honey in sections, with none to satisfy the demand. It would bring 22c. readily for choice. Buckwheat honey, no sale. Extracted, 11@12c. per lb.

BEESWAX—25@30c.

A. C. KENDEL, 115 Ontario Street.

NEW YORK.

HONEY—Scarcely any demand reported for honey; prices weak and little more than nominal. We quote as follows: White comb, in small boxes, 15@17c; dark, in small boxes, 11@12c. Extracted, white, 9@10c.; dark, 7@8c.

BEESWAX—Western, pure, 24@25c.; Southern, pure, 23@24c.

THORN & Co., 11 and 13 Devoe avenue.

SAN FRANCISCO.

HONEY—Sellers are more numerous than buyers. In fact, the latter are very hard to find. Comb of fair quality is seeking customers at 11@12c. Nearly 300 cases, mostly extracted, arrived this week, the bulk of which went to a packing house.

We quote white comb, 15@18c.; dark to good, 10@14c. Extracted, choice to extra white, 8@9c.; dark and candied, 6@7c. **BEESWAX**—23@25c.

STEARNS & SMITH, 423 Front Street.

BOSTON.

HONEY—Trade quiet. We quote at 20@22c., according to quality.

BEESWAX—Prime quality, 25c.

CROCKER & BLAKE, 57 Chatham Street.

ST. LOUIS.

HONEY—In fair demand. Strained selling at 8@10c.; comb scarce—nominal at 21@22c.

BEESWAX—Stiff at 20@21c. for prime.

R. C. GREER & Co., 117 N. Main Street.

BINGHAM SMOKERS.

I can sell the above Smokers at MANUFACTURERS' PRICES, by mail or express, at wholesale or retail. All the latest improvements, including the CONQUEROR.

Send for my 32-page Illustrated Catalogue of Bee-Keepers' Supplies of every description.

ALFRED H. NEWMAN,
923 W. Madison, CHICAGO, ILL.

Be SURE

To send a postal card for our Illustrated Catalogue of Apian Supplies before purchasing elsewhere. It contains illustrations and descriptions of everything new and valuable needed in an apiary, at the lowest prices. Italian, Cyprian and Holy Land Queens and Bees.

J. C. & H. P. SAYLES,
Hartford, Wis.

4sm15t

**Stanley's Vandervort Foundation.**

We have just purchased a large amount of bright yellow beeswax, and are now prepared to furnish comb foundation in any size, either heavy or light. Our old prices were based on the low prices of wax last year, but as wax has now advanced about 4c. per lb., and we have also made great improvements in our mode of cleaning the wax, we are obliged to advance the price of our foundation 5c. per lb., making now thin foundation, 10 feet per lb., 55c., and heavy foundation, 5 ft. per lb., 43c. If 100 lbs. is wanted at one time, deduct 2c. per lb. from the above list. We would advise our friends to order soon, as we look for a still greater advance in wax, and we can make much nicer thin foundation before hot weather comes. Send for samples to

G. W. STANLEY & BRO.,
Wyoming, N. Y.

**TO BEE-KEEPERS.**

Having had so great a call for Hives and Supplies the past season, I have purchased additional power and machinery and fitted up a factory for the sole purpose of manufacturing Apian supplies. I am now ready to furnish Hives, Section Boxes, or anything in the Apian line, kept on hand or made to order. Having wintered my bees successfully the past winter, I will sell a few colonies at the following prices: Black bees, \$6.50 per colony; Italians, \$8.50; Italian Queens, untested, \$1; tested, \$2. Probably there will be no queens ready before June 1st. Bees per pound, \$1.50; to those not used to introducing queens, it will probably be better to get a pound of bees with a queen, turn them loose on empty combs, or a hive filled with comb foundation, and they will build up to a good strong colony during the season.

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PRIZE QUEENS FOR 1882, From the Evergreen Apiary.

REV. E. L. BRIGGS, of Wilton Junction, Iowa, will furnish Italian Queens from either of his Prize Mothers, as early in the coming season as they can be bred, at the following rates: Tested Queens, \$3; Warranted Queens, \$2; Queens without guarantee, \$1; Two comb Nucleus, with Tested Queen, \$4. Orders filled in rotation, as received, if accompanied with the cash.

Sw26t

Italian Bees for Sale.

I have for sale about 40 Colonies in 10 frame Langstroth hives. All are in prime condition, and have young queens. Will be delivered after April 20th. Price, for Italians, \$9; a few good Hybrids, \$1 less. Satisfaction guaranteed.

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Deutsche Gefuegel und Bienen-Zeitung.

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Complete Apiary for Sale.

An Apiary of 90 COLONIES OF ITALIAN BEES, with buildings and all modern appliances for running the same; are within 23 miles of Chicago, in a splendid location for wild pasture. These bees show a good record for last season—2,984 lbs. comb honey from 43 colonies, and increased to 100 colonies. They are in prime condition now, with

PROSPECTS OF A GOOD SEASON.

I want to go into other business this fall, and would sell now, giving the purchaser the benefit of this season's work (and my services if wanted), as an inducement to buy. Terms will be reasonable, and partly on time if necessary. Correspondence solicited.

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17wtf

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75 Colonies for sale. If you wish bees for work, send for prices.

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ONE-PIECE SECTIONS a specialty. Pound size, \$4.50 per 1,000. L. Hives 50c. Also, Italian bees for \$8 per colony. Circular free.

8sm12tp BYRON WALKER & CO., Capac, Mich.

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I am now booking orders for my GOLDEN ITALIANS, reared from the best stock in the country. Warranted Queens, \$1; Tested Queens, early in the season, \$2.50; after July, \$2; 2 frame Nucleus, with Tested Queen, \$4; Full Colony, with Tested Queen, \$10. The Best Quinby Smoker for \$1.50. Address all orders to

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Owing to the increased demand for Melilot and Bokhara Clover seed, my liberal supply has been exhausted, and I can obtain no more in this country. I cannot, therefore, fill any more orders for either until the new crop comes in, and more can be imported.

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1-frame Nucleus, with Tested Queen.....\$4.50
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Full Colony, with Tested Queen, before July 1.....12.00
Same, after July 1.....10.00
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Send for our 28-page Illustrated Catalogue of Bees, Queens and Bee-Keepers' Supplies before purchasing elsewhere. Choice bees, good goods, and satisfaction guaranteed.

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For Early Italian and Cyprian Queens;

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Foundation all ready for business. Every sheet wired and bound around with a light wooden rim, ready to adjust instantly in your frame. No advance in price. Small sample for 6 cents. I shall also breed choice Italian and Holy Land Queens, practicing a new stimulative process. Write now for prices and particulars. Address, 9smly **JOHN H. MARTIN,** Hartford, N. Y.

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Price \$4.50 per 1,000, any size to 6x6.

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C. Olm's Comb Foundation Machine.

Send for Sample and Circular.

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Pure Italian Bees,

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Watertown, Wis., Dec., 1881.

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BEE-KEEPERS.

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The above cut represents my all-in-one-piece section, which is made in thickness according to size. Try one box of these sections, and you will never use any other. Printed directions in every box, showing how to fold them. Last year I could not fill all of my orders for sections, but I have a large stock of them on hand at present. Give me a trial. Send for FREE price list.

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Full Colonies, Nuclei, Tested and Untested Italian Queens, bees by the pound. I guarantee safe arrival. Address, **OTTO KLEINOW,**
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Cut by machinery: are much cheaper and better than hand-cut, and perfectly straight; 1,000 to 5,000, 25c.; 6,000 to 10,000, 22c.; over 10,000, 20c.; 6c. per 1,000 extra by mail. Samples for 3c. stamp.

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In answer to frequent inquiries for Extractors carrying 3 and 4 Langstroth frames, I have concluded to adopt these two new sizes. The 3 frame basket is in a can of the same size and style as the 2 frame. The 4 frame basket is in the larger can, with the cone or metal standard for the basket to revolve upon, leaving room underneath the basket for 75 or 80 lbs. of honey. It will be complete, with covers, and in every way identical, except in size, with the \$16.00 Extractor, 13x20, which is intended for any size of frame. Excepting with the \$8.00 Extractors, all the different styles have strainers over the canal leading to the honey gate, and moving sides in the Comb Baskets.

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and our wax is nowhere to be equalled for cleanliness, purity and beauty. Extra thin and bright for sections. All shapes and sizes.

Samples free on request.

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We now quote an

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QUEENS AND NUCLEI IN SEASON.

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Italian and Cyprian Queens,

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Full Colonies of Italian Bees,

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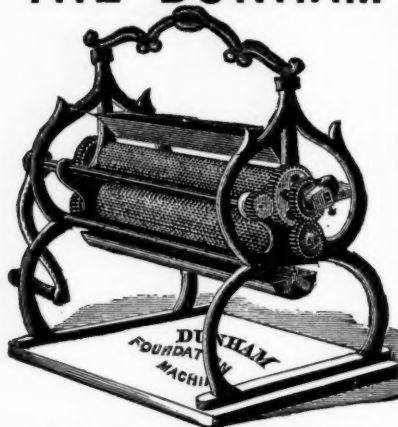
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I make a specialty of rearing pure Holy Land Queens, and have now more than 100 colonies in their purity. All Queens bred from D. A. Jones' Imported Queens. Dollar Queens, before June 20, \$1.25 each; after that date, single Queen, \$1.00; 6 for \$5.00; 12 or more, 75 cents each; Warranted Queens, 25 cents more each. Tested Queens, \$2.50 each; Italian Queens, same price.

I. R. GOOD,

5w1y

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Muth's Honey Extractor,

Square Glass Honey Jars, Tin Buckets, Langstroth Bee Hives, Honey Sections, etc., Apply to C. F. MUTH,

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Send 10c. for Practical Hints to Bee-Keepers. 1w1y

100 Colonies

FOR SALE. ALSO,
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And all Useful Supplies.

Circulars sent on receipt of address only, by
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100 Colonies of Italian Bees for Sale, IN SIMPLICITY HIVES.



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Queens: Italian, Cyprian and Albino; Comb Foundation: Given, Vandervort, Dunham and Root; Hives, Smokers, Frames, Seeds of Honey Plants, and everything required in an apiary. Send for price

E. T. FLANAGAN,

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The change of numbers will cause no delay, as we are in the same postal district, and being the largest patrons of this postoffice, are well known to its officers and employees.

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